LOPHOPUS BRISBANENSIS. *SP. NOV.*

By W. R. Colledge.

(With one plate).

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The only species of Lophopus recorded from Australia appears to be *L. lendenfeldi* Ridley found in the Parramatta River, N.S.W. I have found in Brisbane some very large beautiful colonies bearing a resemblance to the well-known "plumed polype" of Trembley, *Lophopus crystallinus*. They differ, however, from that species and also from *L. lendenfeldi* in important points, so that we have presumably a new species.

It is found in freshwater creeks, on the under side of water-logged timber and on the naked roots of trees beneath the surface of the water. When lifted out it appears as little masses of greenish jelly. The form of the zooids is similar to the European species. The polypes of the Brisbane form, however, are larger, and while half a dozen of the old world species occupy one sac, as many as thirty are found within the same cover here.

In the European colony and also in *L. lendenfeldi*, a thin transparent membrane envelopes each colony and forms a disc of attachment to its substratum. This I have not observed, but when a colony is torn away from its resting place a thin membrane is seen to be the means of attachment; this does not spread around the colony as is represented in the illustrations of the two forms I refer to.

Another important difference from the European species is in the absence of the epistome—I do not find any trace of it in our species, nor has it been observed in *L. lendenfeldi*.

The mouth of the European form is shown as a round aperture ; in the Brisbane form the mouth is seen as a long slit in the floor of the vestibule, lying parallel to the horizontal arms of the lophophore. As it opens a funicular space, densely clothed with cilia, is revealed ; the base opens by an oblique channel into the wide tube forming the main portion of the gullet, a strong cup-shaped muscle dividing it from the stomach. Here the food collects and at intervals a muscular wave passes down the organ ; as it reaches the sphincter relaxation ensues and the material is forced into the stomach.

The statoblast also differs from *L. crystallinus* and *L. lendenfeldi*. In the former, there is an angle rising to a sharp point at either end : in the latter the form is a long oval with a smooth outline. In our species it is circular in its early stages, becoming slightly oval at maturity, and alternately sending out from each end about ten short, serrated filaments of similar structure to that of the cells of the annulus. The nucleus is large, brown, lenticular and the annulus narrow and pale.

PLATE III.

Fig. 1. Colonies on root (natural size).
Fig. 2. Colony (× 6).
Fig. 3. Statoblasts (× 17).

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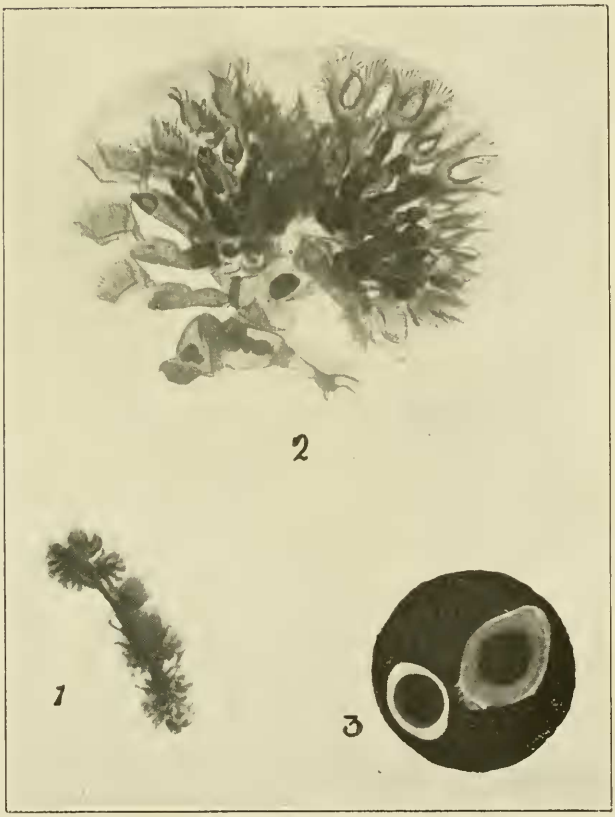

Lophopus brisbanensis, sp. nov.

1. Colonies on root (nat. size).
2. Colony (× 6).
3. Statoblasts (× 17).